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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT PAPER NUMBER

1713

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,423

Applicant(s)

RIHAN ET AL.

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. In Paper No. 02/17/2004 Applicants amended independent claims 1, 13 and 16 to introduce additional "at least one film forming polymer different from acrylic polymer of (a), as well as the limitations on the relative amount of acrylic polymer (a) in the composition. Optional curing agent was introduced as well.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-22 stand rejected under 35 U.S.C. 102(b) as being anticipated by Rink et al (U.S. 5,759,631).

Rink discloses **a refinish clear coating composition** comprising

- (A) **at least one** hydroxyl group-containing polyacrylate resin obtained by polymerizing
- (a) from **5 to 80% by weight of a cycloaliphatic ester** of methacrylic acid and/or acrylic acid, or a mixture of such monomers,
 - (b) from **10 to 50% by weight of a hydroxyl group-containing alkyl ester of methacrylic acid and/or acrylic acid, or mixtures of such monomers,**
 - (c) from 0 to 25% by weight of a **hydroxyl group-containing**, ethylenically unsaturated monomer, different from (a) and (b), or a mixture of such monomers, (reads on second hydroxy functional monomer)
 - (d) from 5 to 80% by weight of an aliphatic ester of methacrylic and/or acrylic acid, different from (a)-(c), or a mixture of such monomers,

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(e) from 0 to 40% by weight of an aromatic vinyl hydrocarbon, different from (a)-(d), or a mixture of such monomers, and

(f) from 0 to 40% by weight of an additional ethylenically unsaturated monomer, different from (a)-(e), or a mixture of such monomers, and

(B) at least one crosslinking agent (curing agent) . (see abstract).

With regard to the new limitation currently presented in claims 1, 13 and 16, Rink teaches that the coating composition in addition may contain one or more other hydroxyl containing group resins (film forming polymer of the instant claims). These resins are different from the above described acrylate resin (A). (see col. 5, lines 52-57).

These resins are usually employed in the amount of 0-25% by weight based on the overall content of the coating composition, and based on the solids content of the binder (col. 5, lines 59-61). Examples of suitable film forming polymers (additional resins) are presented starting in col. 5, line 63 through col. 6, lines 1-41. The coating composition usually contains 15-45% by weight of acrylate resin. Thus the range of 15-45% is within the instantly claimed range of 5-60%, wherein both end points of the reference range are within the instantly claimed range, and, therefore, the claimed range is anticipated.

The number average molecular weight is 1000 –5000 (column 2, lines 20-25). This meets the limitations of the instant claims 1 and 16 . With specific regard to claims 5, 9, 13, the weight average $M_w = M_n \times \text{polydispersity}$, which is said to be lower than 5 (column 2, line 23) , preferably from 1.8 to 4 (column 3, lines 16-20). Thus inherently $M_w = 5,000 \times 4 = 20,000$, which satisfies the limitations of claims 1 and 5. The hydroxyl

number of a polymer is 60-180 mg of KOH/g, which meets the limitation of the instant claim 9.

Monomers (d) and (e) described in column 5, lines 25-43 meet the requirements of claim 10.

With specific regard to claims 18 and 19 Rink discloses that a coating composition employs crosslinking agent (B), which is selected from the group consisting of at least one **diisocyanate, polyisocyanate which contains isocyanurate** groups, and mixtures thereof. (see claim 11).

With regard to the process of coating, as per instant claim 16 Rink discloses the process summarized in claim 12, which is the process of the instant claim. The clear coating composition of Rink is designed for VOLVO.

With regard to the limitation of the instant claims 11 and 12 on a viscosity expressed in Stokes it is a base presumption, that since the compositions of the instant claims and Rink are identical and are made by essentially the same method, the properties even if not taught will be inherently the same. Products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore if the prior art teaches the identical chemical structure, the properties and characteristics applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705,709,15 USPQ2d 1655,1658 (Fed. Cir. 1990). Consult also *In re Fitzgerald*. In other words when the claimed compositions **are not novel**, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art.

The method of refinishing substrate as per instant claims 16-22 and 25 is disclosed in Rink in col. 8, lines 30-61, and meets all the limitations of the instant claims in terms of methods steps and applied compositions.

Therefore all the limitations of the instant claims are either explicitly or inherently met by the disclosure of Rink.

4. Claims 1-16, 22-25 are rejected under 35 U.S.C. 103(a) as being anticipated by Rockrath et al (U.S. 5,716,678) in view of Rink.

Rockrath discloses a clear coating composition and method of a production of two-coat finish on a substrate, a transparent coat composition containing a hydroxyl group-containing polyacrylate resin produced by polymerizing

(a) 10 to 51% by weight 4-hydroxy-n-butylacrylate or

4-hydroxy-n-butylmethacrylate or a mixture of 4-hydroxy-n-butylacrylate and 4-hydroxy-n-butylmethacrylate;

(b) 0 to 36% by weight of a hydroxyl group-containing ester of acrylic acid different from (a) or a hydroxyl group-containing ester of methacrylic acid or a mixture of such monomers;

(c) 28 to 85% by weight of an aliphatic **or cycloaliphatic ester** of methacrylic acid different from (a) and (b) with at least 4 C atoms in the alcohol residue or a mixture of such monomers;

(d) 0 to 3% by weight of an ethylenically unsaturated carboxylic acid or a mixture of ethylenically unsaturated carboxylic

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acids and

(e) 0 to 20% by weight of an ethylenically unsaturated monomer different from (a), (b), (c) and (d) or a mixture

of such monomers, into a polyacrylate resin with a hydroxyl number from 60 to 200 number average molecular weight from 1,500 to 10,000.(abstract) and a curing component (B) (col.5, lines 17-22). Component (b) is described in column 4, lines 28-40. With regard to specific limitations of claim 5 that recites the weight average molecular weight, $M_w = M_n \times \text{polydispersity}$, it is a base presumption that the weight average molecular weight is within the claimed range, since the polymers of Rockrath are essentially the same as instantly claimed and are made by essentially the same methods as those of the instant claims. It is also noted that the polydispersity of such polymers is usually larger than 2, which is evidenced above by Rink. Method of refinishing a substrate, as per claim 16 is described in col.9, lines 40-54.

Rockrath is silent about additional film forming polymer different from acrylate resin. However, the intention to obtain transparent covering composition does require enhancement of film forming properties, and therefore, it is within the skill of those skilled in the art to add additional film forming polymer resin as taught by Rink for almost identical composition in order to enhance film forming properties and impart other desirable properties, such as adhesion, drying time, pot life, etc., and will thus arrive at the instantly claimed subject matter.

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5. Claims 1-3, 5-21, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/22646 in view of Rink.

WO'646 discloses clearcoat refinish composition comprising a hydroxylcontaining acrylic polymer present in the amount between 60-90% in a composition and a polyisocyanate crosslinking agent (abstract). The hydroxyfunctional polymer is described on page 5, lines 15-30, wherein the hydroxyfunctional monomer is preferably 4-hydroxy-n-butyl(meth)acrylate, and the cycloaliphatic acrylate comonomer is within the range of 45-95% by weight and is preferably cyclohexyl methacrylate. The acrylic solution polymer typically has a number average molecular weight of 1,000-30,000 (page 6, lines 23-26). Crosslinking agents are disclosed on page 6, lines 27-31). The process of refinishing substrate, which is preferably an automotive part is described in details on page 10, lines 6-30. Table 6 on page 19 presents the values of hydroxyl numbers that are within the claimed range for the majority of working examples. Hydroxyl number is preferably 30-125 KOH/polymer (page 6, line 6). Acrylic polymer is typically present in the film-forming composition in an amount ranging from between about 60 to about 90 weight percent (page 4, lines 21-25).

WO'646 is silent about the additional film forming polymer different from acrylate resin. However, the intention to obtain transparent covering composition does require enhancement of film forming properties, and therefore, it is within the skill of those skilled in the art to add additional film forming polymer resin as taught by Rink for almost identical composition in order to enhance film forming properties and impart

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other desirable properties, such as adhesion, drying time, pot life, etc., and will thus arrive at the instantly claimed subject matter.

Response to Arguments

6. Applicant's arguments filed 02/17/04 have been fully considered but they are not persuasive.

With regard to Rink reference the crux of Applicants' arguments appears to hinge on the statement that Rink's reference provides no anticipation it is with regard to the limitation of at least about 45% " ...not exact enough to identify what the parameter were that would produce the beneficial properties" ; MPEP 2131.03(evidence of unexpected results within the claimed narrower range support conclusion narrower range not disclosed with sufficient specificity to anticipate).

Applicants further argue that Rink patent discloses a polyacrylate resin that may have as little as 5 weight percent of cycloaliphatic methlacrylate. The Rink patent provides no example of a resin including at least 45% by weight of a cycloaliphatic monomer. Applicants further state that all of the examples the Rink patent discloses have less than 45% by weight of a cycloaliphatic monomer, and none of the examples has a number average molecular weight of at least about 5000.

This is not persuasive because Rink does expressly disclose each and every limitation of the extremely broad limitations of the instant claims 1-4, 6-25. The range claimed by Rink 5-80% , incorporates a very broadly claimed range at least 45% . As

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stated in MPEP 2131.03 a specific data point is defined as either end point of the range or a disclosed data point of the reference. It has long been held that the disclosure in the prior art of any range within, overlapping or touching the claimed range, anticipates when the prior art range discloses the claimed range with sufficient specificity. In the instant case a person skilled in the art would have clearly envisaged the claimed "at least 45%" from the disclosed 10-80% range as per Rink.

The Declaration under 37 CFR 1.132 filed December 17, 2002 is insufficient to overcome the rejection based upon Rink as set forth in the last Office action because:

a) the evidence of the secondary considerations, such as unexpected or superior results, as Applicants try to show in is irrelevant to 35 USC 102 rejections and cannot overcome a rejection so based, *In re Wiggins*, 488 F. 2d 538,543, 179 USPQ 421, 425 (CCPA 1973), consult MPEP 2131.04.

b) the example in the Declaration utilizes a **single data point** within very broadly claimed range.

Next Applicants' argument resides in contention that Rink's examples disclose 14-23% of t-butylcyclohexyl acrylate content and the polymers containing this amount of t-butylcyclohexyl acrylate show molecular weight from 2400 to 2700. In response to this, Applicants are advised that disclosed examples and preferred embodiments do not constitute a teaching away from a **broader disclosure or nonpreferred embodiments**. *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). "A known or obvious composition does not become patentable. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art,

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including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also Celeritas Technologies Ltd. v. Rockwell International Corp., 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998). Rink clearly teaches the number average molecular weight is 1000 –**5000** (column 2, lines 20-25).

With regard to Rockhart reference, Applicants arguments reside in contention that Rockhart does not disclose a clearcoat composition containing an acrylic cycloaliphatic monomer. This is not found persuasive, see **(c) 28 to 85%** by weight of an aliphatic **or cycloaliphatic ester** of methacrylic acid different from (a) and (b) with at least 4 C atoms in the alcohol residue or a mixture of such monomers in the abstract.

With regard to the curing temperature, which Applicants allege to be in Rockhart 130-140°C, it is the Examiner's position that Rockhart discusses the temperature at which the top coat and the basecoat are baked together, not necessarily the curing temperature of acrylic resin. Furthermore, Applicants' arguments are more specific than the claims, because the curing temperature is not recited in the instant claims.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See **In re Van Geuns**, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). With regard to the showing of unexpected results, that are applicable to the rejection under 35 USC 103, it is noted that the example in the Declaration utilizes a **single data point** within very broadly claimed range. Furthermore, as stated in MPEP 2144.06 "...Office personnel should not require the applicant to

show unexpected results over **the entire range of properties possessed by a chemical compound or composition**” .

See, e.g., In re Chupp, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987).

The same rationale applies to Applicants arguments with regard to the WO'646 reference. Applicants argue that WO'646 does not teach the method of refinishing substrate. Applicants attention is drawn to the entire page 10 and lines 1-10 of page 11, wherein such method is described.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

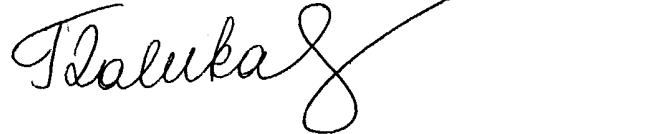
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713

May 04, 2004

A handwritten signature in black ink, appearing to read 'T. Zalukaeva', with a long, sweeping horizontal stroke extending to the right.